

REMARKS

Interview with the Examiner

The Applicant's representative would like to thank Examiner Dr. Jeffrey Barton for the courtesy extended during the Examiner's Interview conducted on May 11, 2005. The discussion centered on the mailing date shown on the final Office Action, December 28, 2004. The Examiner determined this mailing date was incorrect and remailed the final Office Action with a corrected mailing date of May 13, 2005.

Status Of Application

Claims 1-5 and 8-29 were pending in the application. By this amendment, new claim 30 is added. The status of the claims is as follows:

Claims 9-29 are withdrawn from consideration.

Claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,908,112 to Pace ("Pace").

Claims 2-4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Pace in view of U.S. Patent No. 5,876,675 to Kennedy ("Kennedy").

Claims 2-4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Pace in view of U.S. Patent No. 5,599,503 to Manz, et al. ("Manz") and U.S. Patent No. 5,296,375 to Kricka, et al. ("Kricka").

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Pace in view of either U.S. Patent No. 6,091,502 to Weigl, et al. ("Weigl") or Swerdlow, et al. "Three DNA Sequencing Methods Using Capillary Gel Electrophoresis and Laser-induced Fluorescence" ("Swerdlow").

Claim 8 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Pace in view of Manz.

Claim Amendments

Claim 1 has been amended to more particularly claim the physical configuration of the first and second electrodes and the motion of the object due to the application of an electric field to the first and second electrodes. Support for the physical configuration of the first and second electrodes and the object motion is found on page 13, lines 2-23 and Fig. 3. Thus, these changes do not introduce any new matter.

New Claim

New claim 30 regards an optical detecting element. Support for the optical detecting element is found on page 11, lines 1-10 and Fig. 3. Thus, claim 30 does not introduce any new matter.

35 U.S.C. § 102(b) Rejection

The rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Pace, is respectfully traversed based on the following.

Claim 1 requires, in part:

a first electrode provided to face said channel at a vicinity of said optical element, said first element provided on an upper surface of said channel; and

a second electrode provided to face said channel at an upstream side of said optical element with respect to a traveling direction of said object, said second electrode provided on a lower surface of said channel in a position at least partially opposite said first electrode,

wherein said object is capable of being approximated to said optical element in a direction transverse to a length of said channel by

applying a predetermined electric field between said first and second electrodes.

Thus, claim 1 requires two electrodes, the first on the upper surface of the channel and the second on the lower surface of the channel. Further, the second electrode is at least partially opposite the first electrode. Lastly, by applying an electric field between the electrodes, the object is approximated (or moved) in a direction transverse to the length of the channel.

In contrast, Pace does not include two electrodes, one being on an upper surface of a channel and the second being on a lower surface of a channel. The electrodes disclosed by Pace are sequential, *see* Figs. 2 and 4, and completely encircle the channel, *see* Fig. 3. Because Pace does not disclose this upper and lower surface electrode configuration, Pace cannot disclose that the electrodes are at least partially opposite each other. Furthermore, the electrodes in Pace are configured to move the object along the length of the channel due an electric field applied to electrodes, *see* column 9, lines 20-37. Because of the configuration of Pace's electrodes, applying an electric field to the electrodes will not cause the object to be approximated in a direction transverse to the length of the channel. Therefore, Pace fails to disclose a number of limitations of claim 1 and cannot anticipate the apparatus of claim 1 for at least these reasons.

Accordingly, it is respectfully requested that the rejection of claim 1 under 35 U.S.C. § 102(b) as being anticipated by Pace, be reconsidered and withdrawn.

35 U.S.C. § 103(a) Rejections

The rejection of claims 2-4 under 35 U.S.C. § 103(a), as being unpatentable over Pace in view of Kennedy, is respectfully traversed based on the following.

As discussed above, Pace fails to disclose (or suggest) at least 1) the electrode configuration and 2) the approximation in a direction transverse to the length of the channel of an object as required by claim 1. The combination of Pace and Kennedy

similarly fails to disclose or suggest these limitations of claim 1. Kennedy includes numerous electrodes, but none are disclosed as being in the configuration required by claim 1. Kennedy's electrodes are positioned within the various reservoirs, *see* col. 6, lines 5 and 6 and Fig. 5, and are not at least partially opposite each other. Kennedy's electrode configuration permits pumping of an object from one reservoir to another, *see* col. 6, lines 29-38. Due to this electrode configuration, Kennedy cannot disclose or suggest approximating an object in a direction transverse to the length of the channel. Thus, the combination of Pace and Kennedy fails to disclose or suggest several limitations of claim 1 and cannot render the apparatus of claim 1 obvious. Claims 2-4 depend from nonobvious claim 1 and are nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claims 2-4 under 35 U.S.C. § 103(a) as being unpatentable over Pace in view of Kennedy, be reconsidered and withdrawn.

The rejection of claims 2-4 under 35 U.S.C. § 103(a), as being unpatentable over Pace in view of Manz and Kricka, is respectfully traversed based on the following.

As discussed above, Pace fails to disclose (or suggest) at least 1) the electrode configuration and 2) the approximation in a direction transverse to the length of the channel of an object as required by claim 1. Manz similarly fails to disclose or suggest these limitations of claim 1. Manz does not disclose any electrodes, and therefore cannot disclose or suggest the required electrode configuration. Without any electrodes, Manz cannot disclose or suggest approximating an object in a direction transverse to the length of the channel. Kricka similarly does not disclose any electrodes, and therefore cannot disclose or suggest the required electrode configuration. Without any electrodes, Kricka likewise cannot disclose or suggest approximating an object in a direction transverse to the length of the channel. Thus, the combination of Pace, Manz, and Kricka fails to disclose or suggest several limitations of claim 1 and cannot render the apparatus of claim 1

obvious. Claims 2-4 depend from nonobvious claim 1 and are nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claims 2-4 under 35 U.S.C. § 103(a) as being unpatentable over Pace in view of Manz and Kricka, be reconsidered and withdrawn.

The rejection of claim 5 under 35 U.S.C. § 103(a), as being unpatentable over Pace in view of Weigl or Swerdlow, is respectfully traversed based on the following.

As discussed above, Pace fails to disclose (or suggest) at least 1) the electrode configuration and 2) the approximation in a direction transverse to the length of the channel of an object as required by claim 1. Weigl similarly fails to disclose or suggest these limitations of claim 1. Weigl does not disclose any electrodes, and therefore cannot disclose or suggest the required electrode configuration. Without any electrodes, Weigl cannot disclose or suggest approximating an object in a direction transverse to the length of the channel. While Swerdlow discloses samples being "injected" at a given electric field, there is no disclosure regarding the electrode configuration that generated this electric field. Because Swerdlow does not disclose (or suggest) the electrode configuration, there can be no disclosure that the electrodes will approximate an object in a direction transverse to the length of the channel. Thus, the combination of Pace and Weigl or Swerdlow fails to disclose or suggest several limitations of claim 1 and cannot render the apparatus of claim 1 obvious. Claim 5 depends from nonobvious claim 1 and is nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claim 5 under 35 U.S.C. § 103(a) as being unpatentable over Pace in view of Weigl or Swerdlow, be reconsidered and withdrawn.

The rejection of claim 8 under 35 U.S.C. § 103(a), as being unpatentable over Pace in view of Manz, is respectfully traversed based on the following.

As discussed above, the combination of Pace and Manz fails to disclose or suggest several limitations of claim 1 and cannot render the apparatus of claim 1 obvious. Claim 8 depends from nonobvious claim 1 and is nonobvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Pace in view of Manz, be reconsidered and withdrawn.

CONCLUSION

In view of the foregoing, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are respectfully requested.

This Preliminary Amendment does not increase the number of independent claims, does not increase the total number of claims, and does not present any multiple dependency claims beyond the number of claims originally paid for. Accordingly, no fee based on the number or type of claims is currently due. If an extension of time is required to enable this document to be timely filed and there is no separate Petition for Extension of Time filed herewith, this document is to be construed as also constituting a Petition for Extension of Time Under 37 C.F.R. § 1.136(a) for a period of time sufficient to enable this document to be timely filed. Any fee required for such a Petition for Extension of Time or any other fee required by this response, including any fee pursuant to 37 C.F.R. §§ 1.16 and 1.17, other than the issue fee, and not submitted herewith should be charged to Sidley

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Austin Brown & Wood LLP's Deposit Account No. 18-1260. Any refund should be credited to the same account.

Respectfully submitted,

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